

Title (en)

MEDICAL DEVICE FOR IMPROVING ENVIRONMENTAL PERCEPTION FOR BLIND OR VISUALLY IMPAIRED USERS

Title (de)

MEDIZINPRODUKT ZUR VERBESSERUNG DER UMGEBUNGSAUFWERKUNG FÜR BLINDE ODER SEHBEHINDERTE BENUTZER

Title (fr)

DISPOSITIF MÉDICAL D'AIDE À LA PERCEPTION D'ENVIRONNEMENT POUR DES UTILISATEURS AVEUGLES OU MALVOYANTS

Publication

EP 3897488 B1 20230118 (FR)

Application

EP 19829281 A 20191115

Priority

- FR 1873115 A 20181217
- FR 2019052721 W 20191115

Abstract (en)

[origin: WO2020128173A1] The present invention relates to a device for improving environmental perception for blind or visually impaired users, comprising: - a set of mechanical actuators (3) intended to be in contact with the skin of a user, - at least one digital camera (6) designed to acquire a current digital image of an environment facing the user, - a processing circuit (2) connected to the camera for receiving pixel signals from the acquired digital image and converting at least one portion of the pixel signals into control signals, each of which powers a mechanical actuator of the set of actuators, - an eye-tracking module for tracking (7) each eye of the user to identify a gaze direction of the user. The processing circuit then selects, in the environment filmed by the camera (6), an area of acquired current image which is a function of the gaze direction and converts the pixel signals of said area into control signals, each of which powers an actuator of the set (3) to stimulate the user's skin.

IPC 8 full level

A61F 9/08 (2006.01); **A61B 3/113** (2006.01); **A61B 5/11** (2006.01); **A61H 3/06** (2006.01); **G06F 3/01** (2006.01)

CPC (source: EP IL KR US)

A61B 3/113 (2013.01 - IL KR); **A61F 9/08** (2013.01 - EP IL KR US); **A61H 3/061** (2013.01 - EP IL KR); **G06F 3/013** (2013.01 - EP IL KR US);
G06V 20/20 (2022.01 - IL KR); **G09B 21/003** (2013.01 - IL KR); **H04N 7/18** (2013.01 - IL US); **A61H 2003/063** (2013.01 - IL KR);
A61H 2201/5007 (2013.01 - EP IL KR); **A61H 2201/5025** (2013.01 - EP IL KR); **A61H 2201/5064** (2013.01 - EP IL KR);
A61H 2201/5069 (2013.01 - EP IL KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

FR 3089785 A1 20200619; FR 3089785 B1 20201120; CN 113507906 A 20211015; EP 3897488 A1 20211027; EP 3897488 B1 20230118;
IL 284036 A 20210831; IL 284036 B1 20240401; KR 20210125980 A 20211019; US 11684517 B2 20230627; US 2022062053 A1 20220303;
WO 2020128173 A1 20200625

DOCDB simple family (application)

FR 1873115 A 20181217; CN 201980088273 A 20191115; EP 19829281 A 20191115; FR 2019052721 W 20191115; IL 28403621 A 20210615;
KR 20217018398 A 20191115; US 201917414704 A 20191115